

As will be seen throughout the discussions of the Scenarios, when users enter the online world, it is not necessarily clear what spheres of activities are public, private, or semi-public. Nor is it obvious whether words, data, or pictures that one can access and download from online databases or discussion groups are protected by intellectual property laws or by privacy laws.

One of the most important things that a school, library, and/or community center can do to ensure privacy, security, and protection of intellectual property on an online system is to make clear and publicly available the policies and the circumstances under which a user might violate the policies. The advice of counsel familiar with the issues in each area of the law would be valuable in establishing frameworks to support these policies and judgments.

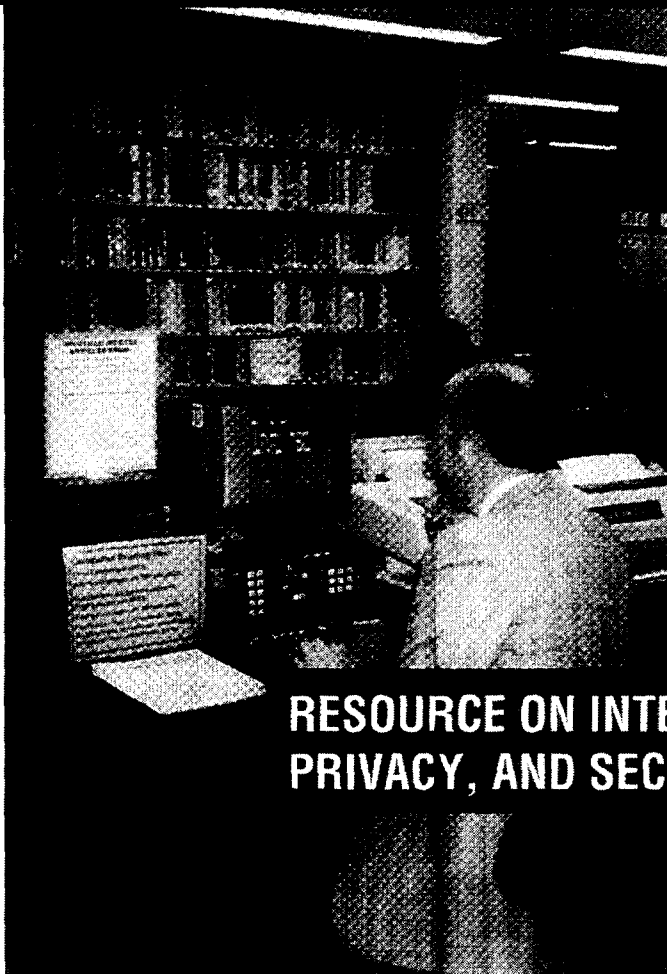
MAINTAINING THE BALANCE: EMPOWERMENT AND RESPONSIBILITY

The Information Superhighway empowers its users but also carries with it responsibility. Maintaining the balance between empowerment and responsibility is not solely the job of the school, library, or community center affording access to the Information Superhighway, but also the job of each and every user and creator of the information resources upon it.

Responsibilities and rights do vary, though, depending on the role of the user, the network, and the system. A school, library, or community center should take care to clarify the role that it is playing in establishing a relationship with a user.

Many of the individuals and organizations already on the Information Superhighway are sharing stories, accessing creative material and producing their own, discussing network problems, and finding solutions every day. For anyone charged with developing guidelines for networks, online peer discussions may be helpful during the preliminary and ongoing phases. Lists of online resources for assistance with general issues are provided in Section 4. For assistance on issues that are unique to a particular situation or constituency, however, advice should be obtained from those with expertise in the appropriate subject area.

section3



**RESOURCE ON INTELLECTUAL PROPERTY,
PRIVACY, AND SECURITY**



Resource on Intellectual Property, Privacy, and Security

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Institutions such as schools, libraries, and community centers have an interest in encouraging their constituents to use information in lawful and ethical ways. This interest arises not only from a concern for education or for good citizenship generally. In some circumstances, an institution that allows its equipment or facilities to be used in ways that infringe someone's legal rights may be liable for the infringement, along with the individual actually making the use. This risk is present when dealing with such rights as those based on the law of intellectual property, communications, privacy, or torts such as defamation. The extent of the risk in each case will vary depending on all the circumstances, including the institution's level of involvement, control over, benefit from, and awareness of the unlawful activity.

It is important to recognize the potential legal exposure without overreacting, and to use common sense in deciding how to respond. Institutions can perform a valuable role in educating their constituents about the legal issues involved in using the Information Superhighway, and in adopting clear policies and guidelines. In some circumstances, particularly in dealing with children, ongoing supervision may be appropriate. On the other hand, once general policies are in place, judgment calls will have to be made for each particular type of use as to what constitutes an appropriate method of supervision and whether the benefits are worth a possible increased risk of liability. The advice of counsel familiar with the issues in each area of the law would be valuable in establishing frameworks to support these policies and judgments.

In developing flexible policies concerning browsing on the Information Superhighway and contributing information, it is useful to encourage teachers and administrators to keep abreast of what users are doing on the Information Superhighway, at least when using the school, library, or community center equipment. Teachers, librarians, and community center personnel should incorporate network-related interests in the curriculum. One method might be to ask students to report on what they like to do on the Information Superhighway. Instead of leaving a student alone with decisions about the legality or ethics of sharing certain material with others in given situations, decisions that students may not yet be mature enough to make, the exchanges should become part of the student's learning experience. By encouraging the open discussion of network activities among students, teachers may have an early indication of problem areas.

For example, although many schools have strict guidelines prohibiting students from giving out personal information on the Internet, a situation could arise where a student is enticed to provide information about his community, school, or family to an entity running a homepage that appears to be a reputable company, but then proceeds to use the information for commercial purposes. In such a situation, it may be necessary for the teacher to alert the school authorities, who can obtain legal guidance on how to proceed.

Rights and interests are rarely absolute. In a classic formulation, the Supreme Court said that the right of free speech does not entitle one to shout "fire" in a crowded theater. Similarly, there may be constraints, overlaps, and conflicts between rights related to intellectual property, privacy, and security interests. For example, the ability to engage in private or anonymous communications does not mean that it is acceptable to use the ability to infringe on someone else's intellectual property rights. As computer networks extend everyone's ability to communicate and share information, there may be a tension between the exercise of those abilities and the legitimate interests of others. Administrators need to be aware of the possibility that conflicts may arise and must be prepared to take action to prevent abuses.

Section 3 is divided into two parts, the first dealing with intellectual property and the second with privacy and security. Each part first provides a primer containing basic information about these topics, then provides some hypothetical scenarios explaining how these ideas apply on the Information Superhighway. When appropriate, Intellectual Property, Privacy, and Security Principles adopted by the Council are referenced. (These principles can be found in either the Council's Policy Document or the Council's midterm report, *Common Ground*.)

COPYRIGHT

Copyright law protects original works of authorship. These include creative works such as fiction and nonfiction writing, movies, TV and radio programs, art, music, sound recordings, databases, and computer software. Our legal system grants copyrights not simply to reward the author for the act of creation, but to benefit the public as a whole. The ultimate purpose of copyright is to expand the pool of information and knowledge available to society as a whole, by spurring creativity in a free market economy while encouraging the interchange of ideas and information. Allowing authors to control the use of their works, and therefore profit financially, gives them an incentive to invest time and effort in creating new works. The more works that are created and disseminated by authors and their publishers, the richer the spectrum of material available to the public. This benefits all of us, by promoting the progress of science and the arts.

As a practical matter, most people, up to now, have been required to have only a passing acquaintance with the principles of copyright law. The new technologies involved in the Information Superhighway make it more important today for the general public to acquire a basic knowledge of copyright. For the first time, the average person sitting at her home computer can gain access to a wide range of every type of copyrighted material, and can easily copy or communicate that material virtually instantaneously. If copyrights in these works are not respected, many copyright owners may be reluctant to make their works available online.

Public education about the meaning and importance of copyright is therefore critical to the Information Superhighway's successful implementation. It is obviously unrealistic to expect everyone to become a copyright expert, but people can learn to be responsible Information Superhighway users by becoming aware of the issues involved when they create, access, receive, or transmit

materials on the Information Superhighway. This will enable them to resolve simple issues on their own and recognize when it is appropriate to seek outside help for more detailed knowledge and advice. A list of organizations that can serve as copyright resources is included in the "Resources for Communities" section.

Even for those who are familiar with copyright law, the Information Superhighway context raises new issues. With traditional technologies, such as photocopiers, it is easy to see that a work has been copied. However, when the digital form of a work is accessed and the results are communicated electronically from one computer to another, it is not obvious to the user whether and at what point in the process a copy has been made or a performance has occurred. Nor is it obvious whether a performance or display of a work at various points in the communications pathway as well as at the point of reception is public or private—a key distinction in copyright law.

The law is evolving in this area. Whether and to what extent the Copyright Act must be amended to take into account the issues raised by new technologies is currently the subject of debate. Some amendments and clarification may turn out to be advisable. Existing rights of copyright owners and creators whose works are used on the Information Superhighway should not be diminished or weakened, and should be able to be exercised in a meaningful way. At the same time, the public's ability under current law to gain access to works and make reasonable uses of them under the fair use doctrine and other exceptions to the copyright owner's rights should also apply on the Information Superhighway.

In some respects, the Information Superhighway will simplify the mechanics of the copyright system. The new technology will eventually make it easier not only to gain access to a wider variety of works, but also to identify legal claims and, where indicated, who would be contacted to obtain permissions and/or make payments. It is in everyone's interest, both copyright owners and users of copyrighted materials, to make these transactions as simple and painless as possible. On the Information Superhighway, licensing information should become more readily available than it is today. Some mechanisms are already in place that can handle licensing; other mechanisms to license online in a matter of seconds are likely to be developed.

The fundamental point is that copyrights should be respected. Each of us is potentially both a copyright owner and a copyright user. While someone may choose to donate his work to the public domain or allow it to be freely used, the choice should be his. Others may want to control who accesses their work and in what context, or may have invested substantial time and money in the work's creation which they need to recoup.

At the same time, the conditions facing users should not be difficult to cope with. A license may often cover the proposed use, and may be easily available. If not, if the user exercises judgment in taking only the amount of work that is necessary, for reasonable, noncommercial purposes that do not interfere with the copyright owner's market, the use may well qualify as fair use or be covered by another exemption.

In other words, we should all do the right thing, exercising common sense.

The use of the Information Superhighway may also raise issues of intellectual property law other than copyright. A word or logo identifying the source of products or services, such as a brand name or a school mascot, may be protected by trademark law. The names and likenesses of real people are protected against certain unauthorized commercial exploitations. And some of the electronic or mechanical components of the technology involved in the Information Superhighway may be covered by patents. The principles involved in these other bodies of law are not discussed in this document.

FOUR KEY QUESTIONS

Whenever someone uses the Information Superhighway, she may be using a copyrighted work, and at the same time may be creating a copyrighted work. In both situations, she needs to understand what types of material are protected by copyright, and what types of uses require permission. These copyright basics are an important part of the Information Superhighway "rules of the road." The essential questions to be asked are the following: (1) is the material protected by copyright? (2) is the proposed use within the copyright owner's exclusive rights? (3) if so, is it permissible under an exception to those rights? and (4) if not, is it covered by a license, either explicit or implied?

1. Is the Work Protected by Copyright?

Some materials that can be found on the Information Superhighway are protected by copyright, and some are not. Copyrights are withheld from certain works for policy reasons; other works have lost their copyrights because of a failure to comply with past legal rules, or because the works are so old that the copyrights have expired. Two general categories of works that are likely to be in the public domain, and therefore free to be copied, are works created by the U.S. Government, and works that were published more than 75 years ago. For many works, unfortunately, there is no simple way to tell. The answer depends on a variety of facts such as who created the work; when, where, and how copies of the work have been distributed to the public; and the date of the author's death. For most newer works, the copyright will last for 50 years after the author's death, or 75 years after publication. If it is important to know the status of a particular work, legal advice should be obtained.

Although copyright owners often use a notice of copyright, and/or register claims in their works with the Copyright Office in Washington, D.C., they are not required to do either under current law. So the fact that a work has no notice on it and does not show up in the Copyright Office's records is not a guarantee that it is in the public domain. A wise approach is to assume that material is protected unless you have reason to believe that it is not.

This is true even for works from other countries. Foreign materials found on the Information Superhighway will often be protected by copyright in the United States. Our law protects works that come from other countries with whom we have a treaty or other copyright relations, in return for their willingness to

protect American works within their borders. It is only a small handful of countries today with whom the United States has no such relationship, and whose works are therefore not protected here.

As a creator of material in digital form, the Information Superhighway user may become a copyright owner as well. Often someone using the Internet inputs his own thoughts in the form of an e-mail message, or by posting material to an electronic bulletin board. This material, if it is original with the creator, and has at least a minimal amount of creativity, will be protected by copyright. Even some less visible types of creative expression are copyrightable. For example, selecting from a group of preexisting materials, and combining or arranging them in a manner that requires thought and judgment, may itself result in a copyrightable work (assuming the use of the materials does not infringe any copyrights).

Moreover, any work created while using the Information Superhighway is automatically protected by Federal copyright law as soon as it is fixed in the computer's memory. The creator does not need to apply for a copyright, register the creation with a government office, or even place a notice of copyright on it. The result is that she can, if she chooses to do so, prevent others from making various unauthorized uses of the new material.

2. Is the Use within the Copyright Owner's Rights?

Finding out whether a work is protected by copyright is only the beginning. A copyright does not give a monopoly over all of the work's contents. Ideas or facts cannot be protected by copyright, and, absent other legal considerations, can be taken directly from a copyrighted work. What is protected is the author's creative expression—the choice of language used to describe the ideas, not the ideas themselves.

In addition, not all types of uses of copyrighted material require the owner's consent. For example, a purely private display or performance of a work is always permitted. Simply looking at a work is not an infringement. The acts that the copyright owner is legally entitled to control are the making of copies, the distribution of copies, the use of the work as the basis for a new work, and acts of public performance or public display.

Most uses of a work on the computer, however, are likely to involve one or more of these acts—sometimes in ways that are not obvious. For example, it is important to understand that copies can be made in many ways, not only by the use of a printer or photocopier, or by pressing a function key. When information in digital form is communicated from one computer to another, it can be argued that a copy occurs in the receiving computer. Some legal questions surrounding copying in the electronic environment have yet to be resolved. (Technically speaking, an exact replica of the information as it existed on the first computer will not generally occur. In particular, the bits may manifest themselves differently on the receiving computer as a result of software operations within both computers, as well as other transformations that may occur in between. Nevertheless, a copyright owner's rights may still be implicated.)

3. Is the Use Permissible under an Exception to the Copyright Owner's Rights?

There are a number of exceptions to the copyright owner's rights—situations where conduct that interferes with those rights is permitted because Congress or the courts have determined that the conduct is justified even without permission or payment. Where appropriate, these exceptions should apply in the Information Superhighway.

The most important exception is fair use. Fair use is a flexible doctrine, intended to allow uses that are reasonable and beneficial to the public without requiring the copyright owner's consent. Whether a particular use qualifies as fair is based on an evaluation of all the circumstances. This includes a balancing of four factors set out in section 107 of the Copyright Act: (1) the purpose and character of the use, including whether it is commercial or for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work. The complexity of this balancing, and its fact-specific nature, make outcomes hard to predict. There are, however, some generally accepted interpretations of the fair use doctrine. For example, the Supreme Court has held that it is a fair use to copy a free broadcast television program at home on your VCR in order to watch it at another time. The classic example of fair use is the quotation from a book in a book review, in order to illustrate the reviewer's point. In less clear circumstances, particularly if the stakes are high because of the time or money involved, or the extent of dissemination of the line, it would be advisable to obtain legal advice.

The availability of reasonable licensing arrangements may be weighed in determining whether a particular use is fair. Efficient and inexpensive means of identifying and locating copyright claimants using network capabilities is essential to encourage new and creative uses.

It is a common misconception that copies or performances made for personal use, or for nonprofit educational use, or for research, are always permitted. The reality is that such uses may be permitted, when they fall within a specific exemption or qualify as fair use, based on an examination of all the circumstances. The personal, nonprofit, or educational nature of the use will, however, strengthen a fair use claim.

Other exceptions to the copyright owner's rights are more specific and detailed. The law contains provisions, for example, dealing with library copying for interlibrary loans, secondary transmissions of broadcasts by cable companies, and the making of a single copy of a computer program for archival purposes. Although there is no general exception permitting all nonprofit or educational uses, a number of provisions exempt certain specific uses of this type. All of these exceptions may be found at sections 108-120 of the Copyright Act.

4. Is the Use Covered by a License?

For many works that are available on the Information Superhighway, it will be possible to get a license from the copyright owner allowing use of the work. As a general rule, it is up to the copyright owner to decide whether or not to grant a license; he has the option of simply saying no. Payment or credit alone is not a substitute for permission. But as a practical matter, if the work has been made generally accessible on the Information Superhighway by the copyright owner, he may be willing to disseminate it further—particularly for a typical individual use by a member of the public.

Licenses may be obtained in many different forms. The easiest case is the general license, where a copyright owner announces to the world that anyone is free to use the work in any way. Some uses of works on the Information Superhighway by individuals will be covered by licenses already in place through service providers. For other uses at locations such as libraries, community centers, and schools, it will be possible to obtain "site licenses," allowing specified uses by multiple users located on site. In addition, some types of use can be licensed for many works at once through organizations set up by groups of copyright owners to administer their rights. And a license can be requested for a single particular use, either through traditional communications media or online. It is also possible to associate simple terms and conditions with the data itself as well as procedures for locating and accessing such data on the Information Superhighway. Finally, permission to use a work may be implied in appropriate circumstances.

Who has the right to grant a license? For users of the Information Superhighway, the answer will be clear in most cases from information posted on the work itself. When creating a work on the Information Superhighway, the answer will be more complex if more than one person participates in the creation process. Sometimes the owner will be the person or business who paid for the work to be created, rather than the actual creator. For example, if an employee creates a work as part of her job, her employer will own the copyright and she cannot use it herself without permission. And if several people work together to create a single work, they may be considered coauthors, jointly owning the entire work. If so, each would have the right to license the work without the others' consent (assuming they shared any profits with them). In addition, copyright rights can be sold or given away voluntarily to new owners.

To assist school administrators and teachers, librarians, and community center personnel who may actually confront situations involving these principles, the following scenarios and discussions are provided. This material is intended only to sensitize Information Superhighway users to the issues and to provide a general framework for resolving them. These analyses are not intended as a substitute for obtaining legal counsel when necessary.

COPYRIGHT SCENARIOS AND DISCUSSION

1. Creation of Multimedia Works Using Online Materials

A class studying American history is assigned to "surf the Net" and put together a multimedia "collage" of materials on a topic of their choice. This collage may take the form of a computer program that is based on or incorporates preexisting works. The Internet offers a variety of resources for them to use, including textual databases, film footage, photographs, and sound recordings that have been converted into various digital formats. What should the teacher tell the class with regard to protection of intellectual property? What are the students' rights in their own work product?

The first issue raised by this scenario is whether the materials the students are using to create their collages are protected by copyright. Unless the materials are clearly in the public domain, or explicitly state that they are dedicated to the public, the answer is probably yes.

The fact that the materials are protected by copyright doesn't necessarily mean that the students can't use them. The next issues to address are what type of uses the students will make of the materials, and whether those uses are covered by a license.

There are several uses that the students may make of the materials without legal risk. Uses that do not involve copying the materials or performing or displaying them publicly are generally permitted. For example, assuming access is permissible under other bodies of law, a student may review an archives table of contents to determine what material is available. In addition, he should be able to search for, and obtain a list of, particular material he is interested in through the use of queries or key words.

Other uses are less clear. The students will probably wish to access the materials they have found. Doing so may entail the making of a copy in the computer's memory, even if that copy is not permanently retained. Depending on the terms under which the materials have been placed on the Internet, this type of transient internal copying might be considered fair use, or permitted by an explicit or implied license, since it is necessary in order to interpret the data and manifest the results.

What about printing out single copies of textual items, solely for the students' personal use to refer to and take notes on in the process of working on their projects? And finally, what about incorporating portions of the materials into the final collages? These acts may involve not just storage in memory but possible interpretation and other manipulation by computer programs of the information in various digital formats. If a substantial amount is copied, permission will be needed unless the use falls within an exception to the copyright owner's rights.

The most obvious exception to consider here is fair use. The students are making the copies for nonprofit educational purposes, which will help in the overall balance. The fair use claim may be particularly strong with regard to the use of small portions of works, or printouts made purely as a matter of convenience in order to avoid taking notes directly from a display on their computer screen. In any event, individual printouts for personal purposes may be covered by the license giving access to the archives.

This scenario, like those that follow, also raises issues of secondary liability for the institution where the acts take place. It would be advisable for the school to have guidelines in place on how to handle copyright issues, particularly when the teacher is giving an assignment that specifically envisions the copying of copyrighted material.

Another set of issues relates to the students' rights as authors of their collages. If the collages are made lawfully, they will be protected by copyright as soon as they are fixed on paper or in the memory of the computer. In most cases, the students' copyrights will protect the creative judgment they used in choosing what materials to include, and in deciding how to combine and arrange them. Likewise, in most cases, the students will have the right to prevent others from copying substantial portions of the collages without their consent. The copyrights in the collages will not, however, give the students the right to prevent copying of the preexisting materials themselves.

2. Downloading of Copyrighted Images

The director of a community center learns that teenagers regularly use the computer terminals at the center to access copyrighted pictures that have been converted into digital form, storing them in personal file areas to which only they and he have the passwords. What should he do?

This scenario raises issues of both intellectual property and privacy. "Accessing" pictures in digital form is likely to involve acts that potentially infringe copyright; when the data are downloaded by the teenagers into the computer's memory, data representing the works will be stored in the files. Unless the owner has granted a license covering this use, the copying may constitute infringement. The fair use doctrine is unlikely to apply where entire works are copied for purposes of entertainment, as a substitute for purchasing them from the copyright owner.

The community center's role here is more passive than the school's role in the first scenario. Assuming that the center is doing no more than providing equipment, which is capable of significant noninfringing uses, and is not requesting or encouraging the teenagers to access and store copyrighted material, it is unlikely to be found liable for the teenagers' acts. The advance posting of a clear copyright policy would put the center in a better position. On the other hand, a decision to supervise the teenagers' uses might increase the center's risk of liability. And once the center staff becomes aware of infringing uses, it should take action to prevent them in the future.

3. Use of Library Computer Terminals

A local public library sets up a computer room filled with computer terminals. Library patrons can use the terminals to watch movies and listen to music on videotapes and CDs purchased by the library. They can also run software programs, and download and print copyrighted materials from databases. The library has site licenses for these programs and databases. What types of policies should the library adopt with respect to intellectual property concerns?

The use of a terminal to watch a movie or listen to music on a videotape or CD placed in that terminal involves the performance of a copyrighted work. If a performance is private, it does not infringe the copyright in the work; if it is public, it may. The question is whether the performance is public or private when an individual patron views, hears, or executes the work on a computer terminal in the public library. If the patron took a movie home and watched it on her home computer, there would be no problem. But because the library is a place open to the public, the performance could be considered public, and therefore potentially infringing. It is possible that one of the specific exceptions to the copyright owner's rights would apply here, but the application of these exceptions to the online environment is not yet clear.

As to the use of databases and software, the question is what acts are covered by the library's licenses. Software licenses may specify a particular number or group of people who are authorized to use the software. In order for the downloading from a database to be lawful, the license must permit accessing some or all of the data to perform operations such as printing, executing, and viewing.

Most database licenses do permit the downloading or printing of individual items, or of reasonable amounts of these items.

4. Electronic Mailing Lists and Use of Copyright Notices

A current events discussion group meets weekly at a neighborhood community center. The group decides to establish an electronic mailing list of friends and acquaintances around the country. Once a week, it will send to the mailing list their own compendium of entertaining news items from the press, with its own humorous comments on each one. Can the discussion group lawfully create and distribute the weekly compendium? Can it place restrictions on the uses that others may make of the compendium, such as prohibiting them from making any changes? On the other hand, can it disclaim any copyright rights and place the work in the public domain?

The facts of the news themselves cannot be protected by copyright, and thus anyone is free to repeat them. However, the language of the article that reports the news in the press is usually copyrightable expression. Whether or not the discussion group is infringing copyrights in the news items will depend on the nature of the material included and the use they make of the compendium. If they create the compendium only for their own amusement, they may be engaging in a fair use. The more widely the compendium is disseminated and the more commercial the dissemination, the less likely the use is to be excused as fair.

Assuming that there is no infringement, the compendium itself may be copyrightable, since it is created through the use of selective judgment as to what news items to include from a vast pool and contains original humorous comments. As soon as each compendium is fixed in the memory of a computer, it is automatically protected by Federal copyright. Since the compendium is a single work merging their individual contributions, those members of the discussion group who contributed creative authorship may be joint authors.

As copyright owners, the discussion group would be able to bar the copying of the compendium without authorization. Although the law does not require it, it would be helpful to place a copyright statement on the screen to let users know that they do claim rights. On the other hand, one is always free to make one's work available to others if one wishes to do so. Again, a simple statement on the screen to that effect would suffice.

It may also be possible to place conditions on the use of one's work even beyond the limitations imposed by copyright law. As a matter of contract, one could tell Internet users when they access the material that they may only use it in specified ways as a condition of access. While the law is not entirely clear, such contracts may be enforceable.

5. E-Mail Discussion Group

At the suggestion of their teachers, students at several schools in different States establish an e-mail discussion group on the topic of the government's role in education. What are the rights of the participants in their contributions to the discussion?

Copyright protects all types of authorship, from the formal structured book published in an edition of tens of thousands to the informal, short note that someone sends to a friend. Any form of expression, as long as it is original with its author and minimally creative, is protected by Federal law as soon as it is fixed in a tangible form. This means that individual comments contributed to an e-mail discussion may be protected by copyright. Accordingly, permission is needed to make copies or to perform and/or display the work publicly, whether done electronically by forwarding a digital version of the work to another person's computer or posting it on an electronic bulletin board, or done the old-fashioned way by printing it out on paper and posting it on a cork bulletin board.

On the other hand, permission does not have to be formally requested and formally granted. By participating in this type of discussion group, the student may have given his implied consent to sharing his thoughts, at least to some extent. The question is whether that consent extends beyond the circle of the discussion group, and if so, how far. There may be a difference, for example, between forwarding the message to other students who would be eligible to join the discussion group, and forwarding it to a broader audience.

6. Digitizing and Uploading Print Material

You are the adviser to the high school newspaper. A student editor digitizes an article by a parent that appeared in the newspaper, along with a cartoon created by another student to illustrate the article, and places both of them on an electronic bulletin board on the Internet, from which they can be downloaded by any subscriber. What policies should the newspaper adopt to deal with this type of situation?

First, it would be wise to adopt a policy assuming that new and original works of authorship such as the article and the cartoon are protected by copyright. Protection exists whether or not the parent writer or student artist took steps to claim copyright, by using a notice or registering a copyright claim in the work, or even knew that the work was protected by copyright.

Second, the newspaper should flag the possibility that this type of use may infringe. Several courts have held that either unloading material onto an electronic bulletin board, or downloading material from such a bulletin board, constitutes copyright infringement. In addition, the digitizing itself may be considered to infringe.

Finally, the student staff should be directed to look at the scope of the newspaper's license. While the parent and the student artist have presumably given the newspaper permission to publish the article in paper form, that permission doesn't necessarily extend to the online environment. Depending on what was said and understood, permission may have been limited to publication in the newspaper, to be distributed to its ordinary circulation at the school.

7. Distance Learning

A teacher demonstrates to her class how to use various word processing programs. The programs are licensed for her computer. Information sufficient to recreate the screen displays is communicated to students at a distance learning site on personal computers, which are linked to hers via a wide area network. Should the school allow this use of the programs?

Computer programs such as word processing programs are copyrightable works. The first question raised by this scenario is whether any of the copyright owner's rights have been infringed. Again, it is necessary to look to the scope of the license. The teacher's license allows her to use the software on her own computer. When the screen display information is shared with the other personal computers, however, copies may be made of portions of the programs in the computers' memories to the extent that the copies incorporate renderings of the original programs. If this additional copying is not authorized by the license, it may constitute infringement as well as breach of contract.

In addition, the communication may infringe the copyright owner's rights of public performance and display. A performance or display of a work is public, and therefore within the copyright owner's control, when it is communicated to members of the public by electronic means, even if they receive the performance or display in separate places and at separate times.

The school should look into the possibility that one of the Copyright Act's exemptions might apply. When the communication of a performance is done as a regular part of systematic instruction for a nonprofit educational institution, it may be permissible even without the copyright owner's consent. The performance may also qualify as fair use, upon consideration of all the circumstances.

8. Library Preservation and Updating of Materials

A library wishes to adapt to and take advantage of modern technology. It makes digital copies of those books in its collections that are beginning to deteriorate physically, in order to preserve them. The original paper books are kept on the shelves. The library also "refreshes" those works it acquired in digital form. This involves making an exact replica of the original and transferring it to the latest storage media, as well as updating the

electronic storage format for use by newer operating systems and retrieval software. The library does not retain the old versions of the digital works, so that it does not end up with more copies than it originally acquired. Are these acts by the library lawful uses of the works it has purchased?

The fact that the library has purchased the initial copies of these works does not mean that it is free to make additional copies. Ownership of a physical copy of a copyrighted work does not carry with it the ability to exercise the copyright owner's rights. Moreover, there is no general exemption permitting all uses of copyrighted works by public or nonprofit libraries.

The copyright law does, however, contain a specific exemption for libraries, allowing them to do a number of things that would otherwise constitute infringement. The library should check this exemption, and determine the extent to which it covers these activities. In the traditional paper-based world, some but not all of the acts of copying in this scenario would be permitted under the exemption. The extent to which the exemption should be extended to allow similar preservationist and archival copying in the digital environment is still unsettled.

Even if the exemption were not extended to digital copying, or for those acts of copying that wouldn't be covered by the exemption, the library may be able to invoke a fair use defense. A court would consider the noncommercial, limited nature of the copying, as well as the extent to which the library's use would substitute for a new purchase from the copyright owner.

9. Digital Manipulation of Copyrighted Materials

A student working at the school computer lab searches through a database on the Internet. She finds a magazine article on the subject of violence in the schools, illustrated by several photographs. As a prank, she changes the references in the article from a center-city neighborhood to the suburbs where she lives, and combines two of the photographs to depict a cache of a frightening assortment of weapons placed on the front steps of her own school. She then transmits the modified versions to her friends at school, and posts them on an electronic bulletin board, without indicating that any changes have been made from the originals. How should school administrators respond?

This scenario involves the manipulation of data and material protected by copyright in a way that is misleading. The ease of such manipulation in the digital environment is one of the major differences from more traditional means of communication.

Recipients of manipulated materials will not get what they think they are getting. Depending on the nature of the data, the dissemination of inaccurate data may lead to real personal or economic harm.

As a legal matter, such manipulation may violate copyright and other laws. Where the materials are protected by copyright, the copyright owner is losing control of the content of the work, which may among other things affect its reputation and hurt its future market. One of the copyright owner's exclusive rights is to create new, derivative works

based on the original. An unauthorized manipulated version of the original would likely be considered to violate that right. In addition, other State and Federal laws may protect the author of the original article and the photographer from having their works changed without their consent, and then published misleadingly above their names.

Again, the circumstances of the use may change the legal outcome. A manipulation that is intended as a joke or humorous comment might be permissible as fair use in appropriate circumstances. A fair use claim would be strengthened if the manipulated version was circulated, without any charge, to only a few friends.

One possible eventual technological solution may be the use of digital signature to validate the accuracy and integrity of material obtained online. In any event, students should be educated as to the potential negative consequences of what may seem to be a harmless prank.

10. Performance of Downloaded Music

A high school has a student-run radio station, that transmits only within the school building. Instead of purchasing records, cassettes, or CDs for transmission over the air, the students decide that they will download songs from an interactive online service. When asked for advice about whether licenses are necessary, how should school administrators respond?

Two separate copyrighted works are involved in this scenario: the musical composition, and the recording of the particular performance of that music—i.e., the combination of recorded sound that makes up what is known as the “sound recording.”

First, when the students store the songs from an interactive online service, they are making reproductions of both the sound recordings and the underlying musical compositions. These reproductions may require licenses from the copyright owners of both works. Moreover, when music is played over the air in the school, a public performance takes place. Even though the school building may not be open to the general public, it contains a substantial number of people beyond the normal circle of a family and its friends. Although the law does contain various exemptions for public performances for educational purposes, they are generally limited to performances as part of a regular course of instruction.

The students will therefore need to obtain licenses for the public performance of the music. Such a license is easy to obtain, for a fee tailored to the nature of the user (i.e., its size and its commercial or nonprofit character), from collection organizations set up for that purpose by music copyright owners. The students will not, however, need a license from the record producers to perform the sound recordings, unless they perform the sound recording digitally on an interactive service or as part of certain kinds of subscription services.

11. Enterprising Student as Service Provider

An enterprising student, wishing to be the local supplier of weather information for the school library, writes an interactive computer program that accesses various digitized materials on the Information Superhighway such as maps, unprocessed data from weather sensors, and government historical information. The program is continually refreshed and provides an informative and entertaining presentation on current and historical weather patterns. Can the program be run by the school library without obtaining further permissions? Can the student make the program available to the local TV station or others for use by the public? What policies should the school adopt to cover situations such as these?

The weather analysis generated by the student's computer program may or may not incorporate any preexisting material subject to copyright. The output would probably be more than simply information stored in a database. Whenever the program is asked to predict the weather, the resulting analysis would represent the results of a performance of the program created by the student, and, if the performance is embodied in a local TV broadcast, this may constitute a public performance for copyright purposes.

As to the preexisting data incorporated in the program, such as the unprocessed data from weather sensors and government historical information, much of it may constitute unprotectible facts or be sources from the Federal Government, and therefore is likely to be in the public domain. The copyright status is less clear, however, if the student links in to a commercial service to access the data. The problem is that the student may get some of the data in the program from an independent private source that has manipulated it in such a way as to create a new version, in itself subject to copyright (such as an interactive weather map). It then becomes difficult to separate out the preexisting unprotectible material from the newly added authorship. Moreover, once the student's program has further manipulated the data, it may be difficult to determine what data came from what source.

There may also be cases in which, while the data itself is in the public domain, commercial entities provide access to the data in real-time in exchange for a limited time duration license on its use. Thus, if the program is updated in real-time using a commercial provider of the weather data, caution must be exercised to ensure that accessing that data does not violate the provider's license from the government or others.

Often, permissions may be obtained, free of charge, to use preexisting information, provided that credit is given to the source. This basic courtesy is often required by contract even where the activity in question may be a fair use or otherwise covered by some exemption. Teachers supervising use of school equipment should be aware of student activity, however, since copyright payments and other fees may be associated with access to various repositories of information, and the school may be liable for such payments. To avoid potential controversies, a school should develop policies relating to student-generated works that are widely publicized.

Finally, since the program may be asked for predictions on which people may rely as a basis for making judgments or decisions that could have important consequences in their

lives, there could be noncopyright liability issues relating to the source and accuracy of the content.

12. Use of Works from Unknown Sources

A student using one of the school's workstations obtains several pieces of software from the Internet and adds code of his own to form a novel agent-based program. Given queries from other students, the program generates and launches software agents into the network which return with information collected and preprocessed by the agents. The student's program integrates the information and stores the result in a database operated and maintained by the school which the students can use at their leisure. Is the school entitled to run such a database for use by the students? Can it make the database accessible throughout the school district? What rights do the student and the school have in the program or the database?

Since school equipment is being used, it is advisable to instruct students on basic copyright principles and alert them generally to the need to obtain prior authorizations. The application of the doctrine of fair use to the acquisition of various software elements from the Internet is as yet undeveloped. Absent security mechanisms to prevent or inhibit access to program elements, it is at least arguable that this activity may be permissible in certain cases. For example, there may be an implicit authorization for contacting and manipulating other network software by a remote agent where the program is designed for such agent manipulation and is publicly accessible on the Information Superhighway.

However, until the situation is clarified, a school should exercise caution in facilitating this activity.

While there are important patent, communications, and other issues that should be addressed in connection with works expressed as sequences of binary digits (or "bits"), from a copyright perspective the student's activity raises legal questions. For example, in the event substantial portions of preexisting programs are incorporated in the student's agent-based program, and provided that these program elements are protected by copyright, it is necessary for the student to obtain permission before making the derivative work. Further, since the program will generate and launch software agents in the network, permissions to perform the underlying program elements in public may also be required.

Again, the analyses of copyright considerations in the above scenarios are not intended as a substitute for obtaining legal counsel when necessary.

Rights and responsibilities in the online environment are still evolving. In making decisions in this largely uncharted world, common sense is still a good guide. Although an analogy to the world of paper records and face-to-face contacts may not always provide a definitive answer to questions about the online environment, it does provide a good starting point. The scope of legal protections, both statutory and constitutional, for online activities is not settled. Our discussions of the scenarios are not meant as "legal advice" but as issues that should be considered.

A general principle that may help guide schools, libraries, and communities in responding to questions and problems that occur when providing access to online systems is to respond based on the norm rather than the exception to the norm. *Infringements of laws and social norms occur in everyday life and will occur in the online world, probably with about the same regularity.* Schools, libraries, and community centers will never be able to control or sanitize online activities completely—the technology and the technical know-how move too rapidly. Instead, the focus may best be placed on sensible responses to protect privacy, security, and intellectual property.

In providing access to online systems, schools, libraries, and community centers can assume different roles, such as system operator, provider, moderator, and contractor with system operator. Responsibilities and rights vary depending on the role. The school, library, and community center should take care to clarify the role that it is playing in establishing a relationship with a user. Organizations providing online access to others must recognize inherent tensions between freedom and responsibility. As the degree of supervision increases, legal liabilities for system operators may arise, and the freedom of users may be restricted. On the other hand, increased freedom and anonymity may make it more difficult to regulate the online world and may increase conflicts between users and overlapping policy goals. In balancing competing interests, the principles on privacy and security adopted by the Advisory Council offer a guide to the development and deployment of an effective Information Superhighway.

As will be seen throughout the Scenarios, one of the most important things that a school, library, or community center can do to ensure privacy, security, and protection of intellectual property on an online system is to state clearly and publicly what the policies are and how a user might violate the policies. When users enter the online world, it is not necessarily clear what spheres of activities are public, private, and semi-public. Nor is it obvious whether words, data, or pictures that one can access and download from online databases or discussion groups are protected by intellectual property laws or by privacy laws. Schools, libraries, and community centers will play a vital role in educating users about such issues.

It may be helpful to view the public-private nature of the Information Superhighway as a continuum. The area of private activity is actually quite narrow, including private e-mail, especially if a message is encrypted. The Electronic Communications Privacy Act prohibits any intentional interception or disclosure

of e-mail messages. An important exception to this is that the system operator—including schools, libraries, and community centers—can read private messages under certain circumstances. A less private sphere of activity includes a variety of bulletin board-type services that require passwords. But in these spheres, messages may be further divulged by another member of the bulletin board. The private nature of these spheres is somewhat illusory. Most other areas of the Information Superhighway are basically public. Newsgroups and chatgroups are accessible to anyone who subscribes. Once again, messages may be further disseminated outside the group. In addition, the account information (name, e-mail address) for subscribers to public groups and bulletin board groups is often widely available.

Schools, libraries, and community centers—as system operators of their own online systems and as providers of access to other online systems on the Information Superhighway—need to decide whether to set up the online system with audit trails that would capture and retain information about online activities. In systems where security and data integrity are important concerns, it is a good use of resources to establish audit trails and retain detailed records. For example, users of online systems for financial or medical information would probably be concerned about security and data integrity. In an educational environment, school authorities would need to determine whether retention of information were warranted given the kinds of communications that are likely to dominate the system. They may also want to consider their potential responsibilities if information is retained. If information about online activities is not retained, then the school will avoid decisions about to whom information should be released. The question becomes whether records of online activities are more similar to records of educational actions or to a trail of browsing. If online activities are more similar to browsing in the library, then divulgence of online activities may have the effect of stifling student use of the Information Superhighway and learning through it.

A theme that recurs in many of the privacy scenarios is that the rights of minors may be different from those of adults. In the school environment, parents and teachers have responsibilities for a child's education that enable them to access a student's records and communications. The scope and detail of online activities may represent a qualitative change from the world of face-to-face contacts and paper records, but it is unclear whether this change will alter parent/student/teacher rights and responsibilities. A second area in which the rights of children are different concerns access to "adult materials." While the First Amendment protects the sale and distribution of materials that are not obscene, it does allow communities to take actions that restrict children's access to such materials.

PRIVACY AND SECURITY SCENARIOS AND DISCUSSION

1. Restriction of Computer Use by Schools

A school wants to establish a policy that school computers can only be used for class-related work. The school does not want students using computers for entertainment (e.g., games) or for inappropriate or illegal activities (e.g., gambling, drug deals, sex chats). Can the school establish and enforce this policy?

In general, it is within a school's authority to establish a policy restricting the use of computers. The school's mission is to educate, and the school's computers are school property. The school can establish restrictions consistent with its educational goals.

School authorities should be sensitive to how broadly or narrowly to define the restrictions. For example, does "class-related" mean that online access is limited to specific class projects, or can it include anything of educational value? Guidelines should be clear so that students understand before going online what is and is not permitted. The guidelines might be posted at each computer terminal and could appear onscreen when students log on.

Restrictions can be enforced by both technical and administrative means. School authorities should consider the kind of online environment they wish to provide. There are software packages and other techniques to guide or limit student access. When students enter the Information Superhighway, there will be access points that require passwords or account numbers. The school, either in contracting with a system operator or serving as system operator, can specify the online services that students may access.

Additionally, school authorities can monitor the accounts of students in different ways (what databases have been accessed, what bulletin boards are frequented, recipients and content of e-mail). It is at this point that schools need to be sensitive to privacy concerns. In determining the degree or level of monitoring, two factors are important. First, users should be told in advance what is being monitored so that they can decide how to use the system. Second, constant or invasive monitoring is likely to result in fewer communications, and users may be restrained in expressing themselves. School authorities need to balance their interest in restricting use with their interest in encouraging students to take advantage of the online environment and to communicate freely within that environment. Protection of privacy is crucial to encouraging free speech and to realizing the full potential of the Information Superhighway.

2. School's Release of Record of Online Activities

A parent asks to see the records of her son's online activities. Should the school divulge those records to the parent? What if a teacher, the PTA, or law enforcement officials want to see records of students' online activities?

Schools may choose not to keep detailed records of online activities. If the school retains records of students' online activities, then parents can legitimately request to see those records. In general, the parent is entitled to see school records of a child. The school could

divulge the records unless the school, system operator, and user (student) had agreed upon a different level of privacy for online communications and related records. Parents of minor children also may need to be a party to the agreement.

If a teacher asks to see the records of a student's online activities, the school should evaluate the educational relationship between the student and teacher. If the student is in the teacher's class and the teacher wants the records to evaluate the student's progress, then the school can make the records available without compromising a student's privacy. If appropriate notice has been given, the student will have an expectation that the records would be available to teachers. This does not necessarily mean that any teacher can ask for the online records of any student in the school. An educational relationship between the student and teacher is a reason for access. If a teacher were interested in a schoolwide study of student use of online systems, a summary report could be provided that did not identify individual students.

If the PTA seeks records of a particular student, a different privacy issue is raised. The 1974 Family Educational Rights and Privacy Act gives parents and students the right to see student records and restricts other disclosures without parental consent. Under existing law, the disclosure of personally identifiable records of online activities to the PTA or to another parent would be illegal without the consent of a student's parents. If the PTA wants to examine online activities of the student body as a whole, the school could provide a summary report that did not identify individual students.

If law enforcement officials ask to see the records of a particular student's online activities, school administrators would want to ensure that the officials were acting with the appropriate authority, as discussed in the following scenario.

3. Online Solicitation of Student

A student disobeys classroom rules and enters inappropriate chatrooms online. Also disobeying school rules, the student gives her real name rather than the online name given to her in school. As a result, an adult user begins sending sexually aggressive messages and calls the child at home. The child's parents claim the school is responsible for threatening the child's security. What is an appropriate response?

Schools and system operators need to be cautious and alert about the possibility that students can make inappropriate contacts or access undesirable materials online. Schools that establish policies restricting use of computers to classroom activities and requiring students to use pseudonyms arguably have taken reasonable steps to protect students from solicitations that may occur on adult chatlines. Other activities include increased monitoring in response to an identifiable problem. Schools can also warn students, in much the same way that generations of children have been warned about the dangers of talking to or riding with strangers. With appropriate rules and supervision, a school may fairly argue that it is not responsible for willful violations of its rules.

Parents could also be informed about the school's online policies and the reasons for the restrictions. Parents could be told about the possibilities of their children accessing inappropriate areas in the online world and be given guidance as to how to advise their

children. In this way, the school would be playing an important role in public education about the Information Superhighway and its potential effect on individual privacy.

Such incidents may occur even if students use their username rather than their real name. In 1994, a man was charged by Massachusetts police with raping teens and preteens after luring them through a computer bulletin board. System operators who make obscene, pornographic, or indecent materials available on their systems are vulnerable to legal challenges, especially if material can be accessed by minors. Operators of such bulletin boards or chatrooms often follow the FCC's dial-a-porn regulations for telephone services. These require reasonable efforts to ensure that each user is at least 18. This may entail written verification of age. Some systems use a special access code, and others scramble or encrypt all indecent materials.

4. Law Enforcement Access to Records

Law enforcement authorities believe that a student has been using e-mail to conduct drug deals both within the school and with students in other schools. They ask to see the stored e-mail and records regarding the student's use of the computer. They also ask to monitor the student's online activities in real-time. When can school officials respond to requests from law enforcement authorities for online records?

School authorities should only reveal student records if the law enforcement officials produce a warrant. The kind of warrant required depends on the material sought. The Electronic Communications Privacy Act (ECPA) requires officials to obtain a warrant to search or seize stored electronic communications that are less than 180 days old. If the e-mail is stored for more than 180 days, then law enforcement officials just need to obtain an administrative subpoena. Under ECPA, law enforcement officials also need a warrant to obtain information about the student's use of the computer. Without a warrant or court order, school officials should not respond. If the school limits its retention of backup information on student computer use, then it will have less information that others may want to access.

If law enforcement officials ask to monitor real-time transmissions, they have to produce a special warrant that specifies the criminal activities, sources that implicated the individual, and the specific system they wish to monitor. This scenario would play out similarly if law enforcement officials approached a library or community center and if they were seeking electronic records related to any criminal activity, e.g., gambling, conspiracy, embezzlement, or selling of obscene material.

If students are communicating on public areas of online systems, then law enforcement officials can, and do, go "undercover" and monitor discussions. Students should be informed that they have no Fourth Amendment expectation of privacy, or any statutory protection through ECPA, on those systems. In general, a school should make clear the differing levels of privacy expectation that exist on public, semi-public, and private systems. These distinctions are difficult to intuit but important for students to realize.

This is one area where the legal answers for the online environment are relatively straightforward. ECPA, which gives statutory meaning to the Fourth Amendment

protection for persons, houses, papers, and effects against unreasonable searches and seizures, defines rights for individual users and responsibilities for system operators and law enforcement officials. If a system operator revealed user records without proper authorization, then the user could sue the operator. If law enforcement seized or searched records without a warrant, then the evidence gathered would be inadmissible in court. It is therefore in everyone's best interests if law enforcement officials appear with the appropriate legal authorization.

5. Casual Overseeing of Inappropriate Material by Children

At a library or community center, a member of the public asks to use a public terminal to establish an e-mail account. This person wants to participate in Internet list servers. The user is observed at the public terminal receiving and sending messages that others likely would find inappropriate for children. What actions are appropriate?

This is similar to situations where children see adults publicly reading books or magazines inappropriate for children, where children see magazine covers or headlines not for children, or where children overhear parts of adult conversations that are not intended for children. These things happen. Children may pass by adults at computer terminals and see words, phrases, or pictures that are inappropriate. Children generally are taught not to stare. They are unlikely to hang over the shoulder of a computer user and read entire messages. If some users are especially agitated about this, the library or community center could establish "adult-only" computer rooms or areas and ask adults who are receiving or sending possibly inappropriate materials to use those rooms.

If a user were flagrantly and continuously making a nuisance by receiving and reading inappropriate material from the Internet, the library or community center might, with proper notice, monitor e-mail records or file contents. If there were inappropriate conduct, the library might also inform law enforcement authorities. This would be especially true if there were complaints that an adult user of online services was using the library as a place to solicit children.

6. Internet Access for Children

A library or community center wants to provide Internet access to children but is concerned that some newsgroups and some areas of the World Wide Web contain unsuitable material. What is the best way to proceed?

A library or community center providing Internet access for children may use available hardware and software to restrict Internet access. It is possible to construct a firewall between a local system and the Internet. Any communications between the two would have to go through the firewall, which could be programmed to restrict Internet access for certain users (i.e., children). Users first would have to log in through the firewall system to access the Internet.

A variation is to provide a software program and menu for an online system that makes it easy for users to access certain parts of the Internet. Standard menu choices might include certain databases, government documents, book and hobbyist discussion groups,